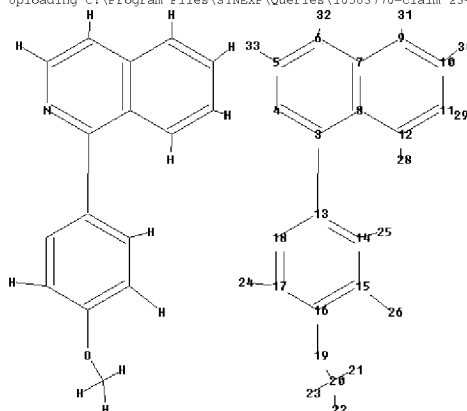


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ring nodes :  
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3-13 5-33 6-32 9-31 10-30 11-29 12-28 14-25 15-26 16-19 17-24 19-20 20-21  
20-22 20-23  
ring bonds :  
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15-16 16-17 17-18  
exact/norm bonds :  
16-19 19-20  
exact bonds :  
3-13 5-33 6-32 9-31 10-30 11-29 12-28 14-25 15-26 17-24 20-21 20-22 20-23  
normalized bonds :  
3-4 3-8 4-5 5-6 6-7 7-8 7-9 8-12 9-10 10-11 11-12 13-14 13-18 14-15  
15-16 16-17 17-18

G1:B,Al,Ga,In,Tl

G2:Cb,Hy,Cy

Match level :

3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS  
24:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS  
33:CLASS

L1 STRUCTURE UPLOADED

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FULL SEARCH INITIATED 14:01:38 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 9291 TO ITERATE

100.0% PROCESSED 9291 ITERATIONS 5 ANSWERS  
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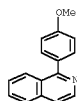
L2 5 SEA SSS FUL L1

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=> s l2  
L3 12 L2

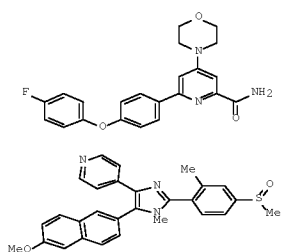
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YOU HAVE REQUESTED DATA FROM 12 ANSWERS - CONTINUE? Y/(N):y

L3 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2009:1158116 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 151:528391  
TITLE: Palladium-catalyzed cross-coupling of aryl halides using organotitanium nucleophiles  
AUTHOR(S): Lee, Hang Wai; Lam, Fuk Loi; So, Chau Ming; Lau, Chak Po; Chan, Albert S. C.; Kwong, Fuk Yee  
CORPORATE SOURCE: Open Laboratory of Chirotechnology of the Institute of Molecular, Technology for Drug Discovery and Synthesis, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong  
SOURCE: Angewandte Chemie, International Edition (2009), 48(40), 7436-7439, S7436/1-S7436/69  
CODEN: ACIEF5; ISSN: 1433-7851  
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 151:528391  
AB Palladium-catalyzed cross-coupling of aryl halides with organotitanium nucleophiles led to the formation of biaryl derivs. in good yields.  
IT 36710-74-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of biaryl derivs. via palladium-catalyzed cross-coupling of aryl halides with aryltitanium nucleophiles)  
RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)  
REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2009:181482 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 150:306011  
TITLE: Palladium-Catalyzed Direct Arylation of Azine and Azole N-Oxides: Reaction Development, Scope and Applications in Synthesis  
AUTHOR(S): Campeau, Louis-Charles; Stuart, David R.; Leclerc, Jean-Philippe; Bertrand-Laperle, Megan; Villemure, Elisia; Sun, Ho-Yan; Lasserre, Sandrine; Guimond, Nicolas; Lecavallier, Melanie; Fagnou, Keith  
CORPORATE SOURCE: Center for Catalysis Research and Innovation  
Department of Chemistry, University of Ottawa, Ottawa, ON, K1N 6N5, Can.  
SOURCE: Journal of the American Chemical Society (2009), 131(9), 3291-3306  
CODEN: JACSAT; ISSN: 0002-7863  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 150:306011  
G1

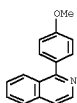


AB Palladium-catalyzed direct arylation reactions were described with a broad range of azine and azole N-oxides. In addition to aspects of functional group compatibility, issues of regioselectivity were explored when nonsym. azine N-oxides were used. In these cases, both the choice of ligand and the nature of the azine substituents played important roles in determining the regioisomeric distribution. When azole N-oxides were employed, preferential reaction was observed for arylation at C2, which occurred under very mild conditions. Subsequent reactions were observed to occur at C5 followed by arylation at C4. The potential utility of this method. was illustrated by its use in the synthesis of a potent sodium channel inhibitor I and a Tie2 Tyrosine Kinase inhibitor II.  
IT 36710-69-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(regioselective palladium-catalyzed direct arylation of azine and azole N-oxides and applications in synthesis)  
RN 36710-69-7 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)-, 2-oxide (CA INDEX NAME)



IT 36710-74-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(regioselective palladium-catalyzed direct arylation of azine and azole N-oxides and applications in synthesis)  
RN 36710-74-4 CAPLUS

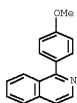
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



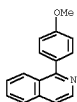
OS.CITING REF COUNT: 39 THERE ARE 39 CAPLUS RECORDS THAT CITE THIS RECORD (39 CITINGS)  
REFERENCE COUNT: 108 THERE ARE 108 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2007:114572 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 146:274005  
TITLE: Cobalt-catalyzed cross-coupling reactions of heterocyclic chlorides with arylmagnesium halides and of polyfunctionalized arylcopper reagents with aryl bromides, chlorides, fluorides and tosylates. [Erratum to document cited in CA146:206042]  
AUTHOR(S): Korn, Tobias J.; Schade, Matthias A.; Cheemala, Murthy N.; Wirth, Stefan; Guevara, Simon A.; Cahiez, Gerard; Knochel, Paul  
CORPORATE SOURCE: Department Chemie, Ludwig-Maximilians-Universitaet Muenchen, Munich, 81377, Germany  
SOURCE: Synthesis (2006), (24), 4270  
CODEN: SYNTBF; ISSN: 0039-7881  
PUBLISHER: Georg Thieme Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The wrong graphic abstract was used for this manuscript in the Table of Contents, both online and in print. The correct version of the reaction scheme is given.  
IT 36710-74-4E, 1-(4-Methoxyphenyl)isoquinoline  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of aryl heterocyclic compds. via iron- or cobalt-catalyzed cross-coupling reaction of chloroheterocycles with arylmagnesium halides (Erratum))  
RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)

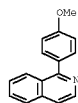


CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, 116023, Peop. Rep. China  
SOURCE: Youji Huaxue (2006), 26(11), 1548-1552  
CODEN: YCHHDX; ISSN: 0253-2786  
PUBLISHER: Youji Huaxue Bianjibu  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
OTHER SOURCE(S): CASREACT 147:143253  
AB A series of 1-substituted isoquinolines were synthesized through the nucleophilic addition reaction of Grignard reagents to isoquinolines under the activation of benzyl chloroformate and aromatization in the presence of Pd/C.  
IT 36710-74-4E  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of 1-substituted isoquinolines by nucleophilic addition of isoquinoline with Grignard reagent)  
RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



L3 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2006:15403 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 144:274396  
TITLE: Color tuning of iridium complexes - Part I: Substituted phenylisoquinoline-based iridium complexes as the triplet emitter  
AUTHOR(S): Fang, Kai-Hung; Wu, Li-Lan; Huang, Yu-Ting; Yang, Cheng-Hsien; Sun, I-Wen  
CORPORATE SOURCE: Department of Chemistry, National Cheng Kung University, Tainan, 70101, Taiwan  
SOURCE: Inorganica Chimica Acta (2006), 359(2), 441-450  
CODEN: ICHAA3; ISSN: 0020-1693  
PUBLISHER: Elsevier B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 144:274396  
AB New Ir complexes with isoquinoline-derived ligands were synthesized for application in organic light-emitting diodes (OLEDs). Varying the substituents at the 2'- or 4'-positions of the isoquinoline ligand makes the color tuning possible. Because of the steric effect, the 6'-substituted complexes: (acetylacetonato)bis[1-(6'-methyl)phenylisoquinolinato-N,C2']iridium(III) (6b1), (acetylacetonato)bis[1-(6'-trifluoromethyl)phenylisoquinolinato-N,C2']iridium(III) (6b2), and (acetylacetonato)bis[1-(6'-methoxy)phenylisoquinolinato-N,C2']iridium(III) (6b3) show red shift effect with respect to the 4'-substituted complexes: (acetylacetonato)bis[1-(4'-methyl)phenylisoquinolinato-N,C2']iridium(III) (6a1), (acetylacetonato)bis[1-(4'-trifluoromethyl)phenylisoquinolinato-N,C2']iridium(III) (6a2), and (acetylacetonato)bis[1-(4'-

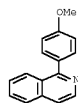
L3 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2006:1250612 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 146:206042  
TITLE: Cobalt-catalyzed cross-coupling reactions of heterocyclic chlorides with arylmagnesium halides and of polyfunctionalized arylcopper reagents with aryl bromides, chlorides, fluorides and tosylates  
AUTHOR(S): Korn, Tobias J.; Schade, Matthias A.; Cheemala, Murthy N.; Wirth, Stefan; Guevara, Simon A.; Cahiez, Gerard; Knochel, Paul  
CORPORATE SOURCE: Department Chemie, Ludwig-Maximilians-Universitaet Muenchen, Munich, 81377, Germany  
SOURCE: Synthesis (2006), (21), 3547-3574  
CODEN: SYNTBF; ISSN: 0039-7881  
PUBLISHER: Georg Thieme Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 146:206042  
AB A range of aromatic organocopper or organomagnesium compds. underwent cross-coupling reactions with aryl bromides, chlorides, fluorides and tosylates, leading to polyfunctionalized aroms. or heterocycles in the presence of cobalt salts as catalysts. Very mild reaction conditions were needed and, in the case of cross-coupling with organocopper compds. In addition, Bu4NI (1 equiv) and 4-fluorostyrene (20 mol%) were essential as promoters for successful couplings.  
IT 36710-74-4E, 1-(4-Methoxyphenyl)isoquinoline  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of aryl heterocyclic compds. via iron- or cobalt-catalyzed cross-coupling reaction of chloroheterocycles with arylmagnesium halides)  
RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)  
REFERENCE COUNT: 103 THERE ARE 103 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2006:1227240 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 147:143253  
TITLE: A new synthetic method of 1-substituted isoquinolines  
AUTHOR(S): Chen, Guo-Ying; Lu, Sheng-Mei; Zhou, Yong-Gui

methoxy)phenylisoquinolinato-N,C2']iridium(III) (6a3). All of these complexes are suitable for the red phosphorescent materials in OLEDs.  
IT 36710-74-4E  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation, structure, electrochem., photoluminescence and use of iridium complexes with substituted phenylisoquinoline-derived ligands as triplet emitters in OLEDs)  
RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



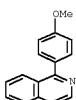
OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)  
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2005:356313 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 143:78282  
TITLE: Substituent effects of iridium complexes for highly efficient red OLEDs  
AUTHOR(S): Okada, Shinjiro; Okinaka, Keiji; Iwakaki, Hironobu; Furugori, Manabu; Hashimoto, Masahiro; Mukaike, Taihei; Kamatani, Jun; Igawa, Satoshi; Tsuboyama, Akira; Takiguchi, Takao; Ueno, Kazunori  
CORPORATE SOURCE: Canon Inc., 5-1, Morinosato Wakamiya, Atsugishi, Japan  
SOURCE: Dalton Transactions (2005), (9), 1583-1590  
CODEN: DTAFAF; ISSN: 1477-9226  
PUBLISHER: Royal Society of Chemistry  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 143:78282  
AB This study reports substituent effects of iridium complexes with 1-phenylisoquinoline ligands. The emission spectra and phosphorescence quantum yields of the complexes differ from that of tris(1-phenylisoquinolinato-C2,N)iridium(III) (Irpiq) depending on the substituents. The maximum emission peak, quantum yield and lifetime of those complexes ranged from 598-635 nm, 0.17-0.32 and 1.07-2.34  $\mu$ s, resp. This indicates the nature of the substituents has a significant influence on the kinetics of the excited-state decay. The substituents attached to Ph ring have an influence on a stability of the HOMO. Furthermore, those substituents have effect on the contribution to a mixing between  $3\pi-\pi^*$  and  $3MLCT$  for the lowest excited states. Some of the complexes display the larger quantum yield than Irpiq, which has the quantum yield of 0.22. The organic light emitting diode (OLED) device based on tris [1-(4-fluoro-5-methylphenyl)isoquinolinato-C2,N]iridium(III) (Ir4f5m) yielded high external quantum efficiency of 15.5% and a power efficiency of 12.4 lm W<sup>-1</sup> at a luminance of 218 cd m<sup>-2</sup>. An emission color of

the device was close to an NTSC specification with CIE chromaticity characteristics of (0.66, 0.34).

IT 36710-74-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation and substituent effects of cyclometalated phenylisoquinoline iridium complexes for highly efficient red OLEDs)

RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



OS.CITING REF COUNT: 49 THERE ARE 49 CAPLUS RECORDS THAT CITE THIS RECORD (49 CITINGS)

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

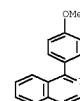
L3 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2003:821645 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 140:27745  
TITLE: New cobalt-catalyzed cross-coupling reactions of heterocyclic chlorides with aryl and heteroaryl magnesium halides

AUTHOR(S): Korn, Tobias J.; Cahiez, Gerard; Knoebel, Paul  
CORPORATE SOURCE: Department Chemie, Ludwig-Maximilians-Universitaet Muenchen, Munich, 81377, Germany  
SOURCE: Synlett (2003), (12), 1892-1894  
CODEN: SYNLES; ISSN: 0936-5214  
PUBLISHER: Georg Thieme Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 140:27745

AB New cobalt-catalyzed cross-coupling between arylmagnesium halides and 2-chloropyridines and related heterocycles occur at low temperature leading to 2-arylated heterocycles in good yields.

IT 36710-74-4F, 1-(4-Methoxyphenyl)isoquinoline  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(cobalt-catalyzed cross-coupling reactions of heterocyclic chlorides with aryl and heteroaryl magnesium halides)

RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



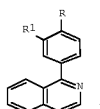
OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2002:670166 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 138:153423  
TITLE: Design, syntheses and biological evaluations of nonpeptidic caspase 3 inhibitors

AUTHOR(S): Kim, Eun-sook; Yoo, Sung-eun; Yi, Kyu Yang; Lee, Sunkyung; Noh, Jae-sung; Jung, Yong-sam; Kim, Eunhee; Jeong, Nakcheol

CORPORATE SOURCE: Department of Chemistry, Division of Chemistry and Molecular Engineering, Korea University, Seoul, 136-701, S. Korea  
SOURCE: Bulletin of the Korean Chemical Society (2002), 23(7), 1003-1010  
CODEN: BKCSDE; ISSN: 0253-2964  
PUBLISHER: Korean Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 138:153423  
GI

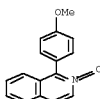


AB Novel caspase 3 inhibitors were designed, based on the active sites of the enzyme and their inhibitory activity was evaluated. The arylisoquinolines (I, R = OMe, R1 = H; R = H, R1 = OMe), their N-oxides, and the methiodide of I [R = OMe, R1 = H] showed significant inhibitory effects (>50%).

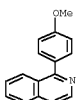
IT 36710-74-7F, 1-(4-Methoxyphenyl)isoquinoline 2-oxide  
36710-74-4F, 1-(4-Methoxyphenyl)isoquinoline  
494749-25-6F  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation of aryl-, arylcarbamoyl-, and aryloxyisoquinolines as caspase inhibitors)

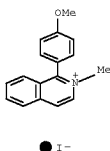
RN 36710-69-7 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)-, 2-oxide (CA INDEX NAME)



RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



RN 494749-25-6 CAPLUS  
CN Isoquinolinium, 1-(4-methoxyphenyl)-2-methyl-, iodide (1:1) (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1976:180004 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 84:180004  
ORIGINAL REFERENCE NO.: 84:29167a,29170a  
TITLE: Benzo- and indoloquinolizine derivatives. VII. The dehydrogenation of enamines in the synthesis of benzo[c]substituted quinolizidines

AUTHOR(S): Van Elnst, G.; Baert, R.; Biesemans, M.; Mortelmans, C.; Salmans, R.

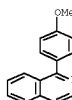
CORPORATE SOURCE: Lab. Org. Chem., Vrije Univ. Brussel, Brussels, Belg.  
SOURCE: Bulletin des Societes Chimiques Belges (1976), 85(1-2), 1-9  
CODEN: BSCBAG; ISSN: 0037-9646  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 84:180004  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Enamines were dehydrogenated with Pd/C in the presence of an H acceptor (styrene or stilbene). Thus, dehydrogenation of 1-piperidino- and 1-morpholino-1-cyclohexene gave 1-phenylpiperidine and 4-phenylmorpholine, resp. The dibenzoquinazolinone I was obtained by dehydrogenation of II. Dehydrogenation of the tribenzoquinolizine III gave IV and V.

IT 36710-74-4C  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)

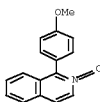


OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

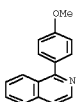
L3 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1972:461765 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 77:61765  
ORIGINAL REFERENCE NO.: 77:10215a,10218a  
TITLE: Free radical reactions of aromatic amine N-oxides. III. Free radical arylation of aromatic amine N-oxides

AUTHOR(S): Natsume, Mitsutaka; Kumadaki, setsuko; Tanabe, Ryosuke  
CORPORATE SOURCE: Japan  
SOURCE: Itsuu Kenkyusho Nempo (1971), (16), 25-39  
CODEN: ITRNA6; ISSN: 0075-2010

DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI For diagram(s), see printed CA Issue.  
AB Meerwein arylation of isoquinoline 2-oxides (I, R1 = R2 = H; R1 = Me, R2 = H; R1 = H, R2 = CO2Me) and quinoline 1-oxides (II, R = H, Me, CN) with benzenediazonium salts (III, R = H, OMe, NO2, CO2Me) took place in Me2CO-H2O containing CuCl2 at pH 3-4, at 0-5°. Phenylation of I took place at the 1-position; of II at the 2-position (16-42%). Phenylation of isoquinoline gave 3% of the phenylated product, which showed the necessity of an N-oxide group to effect the reaction. In the pyridine N-oxides, the reaction proceeded sluggishly and gave unsatisfactory results. Arylation of 2-methoxyisoquinolinium methosulfate gave phthalazines.  
IT 36710-68-7C 36710-74-4C 36710-81-5P  
RL: SFN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 36710-69-7 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)-, 2-oxide (CA INDEX NAME)



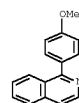
RN 36710-74-4 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)- (CA INDEX NAME)



RN 36710-91-5 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)-, compd. with 2,4,6-trinitrophenol (1:1)  
(CA INDEX NAME)

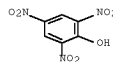
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CRN 36710-74-4  
CMF C16 H13 N O



CM 2

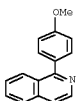
CRN 88-89-1  
CMF C6 H3 N3 O7



L3 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1931:2535 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 25:2535  
ORIGINAL REFERENCE NO.: 25:297a-c  
TITLE: Action of lithium alkyls upon acridine and several other alkali organic reactions in the acridine series  
AUTHOR(S): Bergmann, Ernst; Blum-Bergmann, Ottilie; von Christiani, Alfred Freiherr  
SOURCE: Justus Liebigs Annalen der Chemie (1930), 483, 80-9  
CODEN: JIACBF; ISSN: 0075-4617  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB Acridine and the Li derivative of PhBr give 9,10-dihydro-9-phenylacridine, m. 170°; p-MeOC6H4Br gives the 9-p-anisyl derivative, m. 183-4°; o-MeC6H4Br gives the 9-o-tolyl derivative, m. 185-6°; the m-isomer m. 148-9deg; a-C10H7Br gives the 9-α-naphthyl derivative, crystals with 1 mol. C6H6, m. 123° (decomposition); in attempting to remove the C6H6 H is evidently split off, since the product gives a deep yellow color with concentrated H2SO4. Isoquinoline and PhLi give a product b14 195-200°, m. 80°; 1-phenylisoquinoline picrate, yellow, m. 165°. p-MeOC6H4Li gives 1-p-anisylisoquinoline, whose picrate, yellow, m. 191°. Reduction of methylacridone with Na in AnOH or the action of MeLi on 9,10-dihydroacridine gives 10-methyl-9,10-dihydroacridine, m. 93-5°. Catalytic reduction of acridine-9-carboxylic acid gives the 9,10-dihydro derivative, m. 205°; the 2 Me esters m. 128-30° and 160-2°, resp. The di-Li derivative of methylacridone and Ph2CCl2 give 9-benzoyl-drylidene-10-methyl-9,10-dihydroacridone oxide, m. 242°.  
IT 36710-91-5P, Isoquinoline, 1-p-anisyl-, picrate  
RL: PREP (Preparation)  
(preparation of)  
RN 36710-91-5 CAPLUS  
CN Isoquinoline, 1-(4-methoxyphenyl)-, compd. with 2,4,6-trinitrophenol (1:1)  
(CA INDEX NAME)

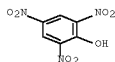
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CRN 36710-74-4  
CMF C16 H13 N O



CM 2

CRN 88-89-1  
CMF C6 H3 N3 O7

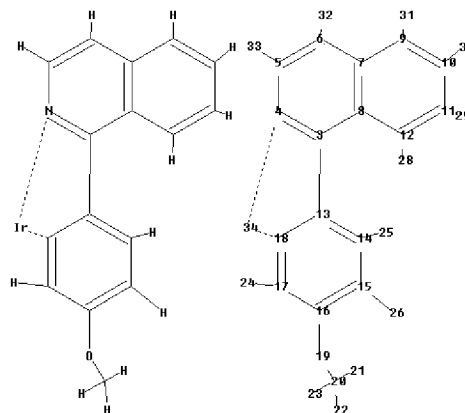


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

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chain nodes :  
19 20 21 22 23 24 25 26 28 29 30 31 32 33  
ring nodes :  
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chain bonds :  
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20-22 20-23  
ring bonds :  
3-4 3-8 3-13 4-5 4-34 5-6 6-7 7-8 7-9 8-12 9-10 10-11 11-12 13-14 13-18  
14-15 15-16 16-17 17-18 18-34  
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exact bonds :  
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normalized bonds :  
3-4 3-8 4-5 5-6 6-7 7-8 7-9 8-12 9-10 10-11 11-12 13-14 13-18 14-15  
15-16 16-17 17-18

G1:B,A1,Ga,In,T1

G2:Cb,Hy,Cy

Match level :

3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS  
24:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS

L4 STRUCTURE UPLOADED

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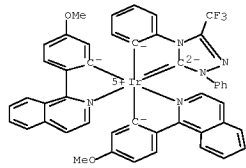
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FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 13244 TO 16516  
PROJECTED ANSWERS: 1 TO 80

L5 1 SEA SSS SAM L4

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L5 1 ANSWERS REGISTRY COPYRIGHT 2010 ACS on STN  
IN Iridium, bis[2-(1-isoquinolinyl- $\kappa$ N)-5-methoxyphenyl- $\kappa$ C][1,2-phenylene[1-phenyl-3-(trifluoromethyl)-1H-1,2,4-triazol-4(5H)-yl-5-ylidene]]- (9CI)  
MF C47 H33 F3 Ir N5 O2  
CI CCS



ALL ANSWERS HAVE BEEN SCANNED

=> s 14 sss full

FULL SEARCH INITIATED 14:04:24 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 14417 TO ITERATE

100.0% PROCESSED 14417 ITERATIONS 12 ANSWERS  
SEARCH TIME: 00.00.01

L7 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2008:284914 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 148:318374  
TITLE: Organic electroluminescent element arrays employing organic layers with optimized thickness using constructive optical interference to improve light extraction  
INVENTOR(S): Furugori, Manabu  
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
SOURCE: U.S. Pat. Appl. Publ., 11 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080054797	A1	20080306	US 2007-845563	20070827
US 7750559	B2	20100706		
JP 2008059791	A	20080313	JP 2006-232354	20060829
KR 2008020509	A	20080305	KR 2007-86357	20070828
KR 914029	B1	20090828		
CN 101137257	A	20080305	CN 2007-10148529	20070829
			JP 2006-232354	A 20060829

PRIORITY APPLN. INFO.: ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Organic electroluminescent (EL) element array are described which comprise a substrate, a first organic EL element emitting red light, a second organic EL element emitting green light, and a third organic EL element emitting blue light; the first, second, and third organic EL elements each include a first electrode, an organic compound layer, and a light-transmissive second electrode arranged on the substrate in that order; the second electrode of the first organic EL element has a semitransparent reflective layer; the first electrode of the first organic EL element has a reflective face and a resonant structure located between the reflective face and the semitransparent reflective layer; and the second and third organic EL elements each has a resonant structure located between a reflective face of the first electrode of the second or third organic EL element and a light-extracting face of the transparent layer of the second or third organic EL element.

IT 906062-31-5  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dopant in emitting layer; organic electroluminescent element arrays employing organic layers with optimized thickness using constructive optical interference to improve light extraction)

RN 906062-31-5 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl- $\kappa$ N)-5-methoxyphenyl- $\kappa$ C]- (CA INDEX NAME)

L6 12 SEA SSS FUL L4

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L7 14 L6

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YOU HAVE REQUESTED DATA FROM 14 ANSWERS - CONTINUE? Y/(N):y

L7 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2008:702460 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 149:66158  
TITLE: Organic electroluminescent devices containing main dopants in nonuniform distribution in host-guest emitting layers  
INVENTOR(S): Kurokawa, Minako; Okada, Shinjiro; Takiguchi, Takao; Igawa, Satoshi; Kamatani, Atsushi; Iwakaki, Hiroya; Hashimoto, Masashi; Oishi, Ryota  
PATENT ASSIGNEE(S): Canon Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008135547	A	20080612	JP 2006-320276	20061128
PRIORITY APPLN. INFO.:			JP 2006-320276	20061128

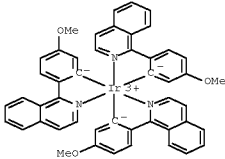
AB The devices have emitting layers containing  $\geq 2$  luminescent metal complexes (i.e., dopants) and host materials, where the main dopants among the complexes are distributed nonuniformly. The devices can be driven at low voltage due to the presence of low-main dopant-concentration regions in the emitting layers.

IT 855532-39-7

RL: MOA (Modifier or additive use); USES (Uses)  
(main dopants in emitting layers; organic electroluminescent devices containing main dopants in nonuniform distribution in host-guest emitting layers)

RN 855532-39-7 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl- $\kappa$ N)-5-methoxyphenyl- $\kappa$ C]-, (OC-6-22)- (CA INDEX NAME)

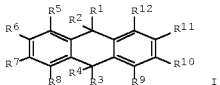


REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2008:39127 CAPLUS [Full-text](#)  
DOCUMENT NUMBER: 148:154937  
TITLE: Compound for organic EL device and light-emitting device  
INVENTOR(S): Kamatani, Jun; Takiguchi, Takao; Okada, Shinjiro  
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
SOURCE: U.S. Pat. Appl. Publ., 27 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080007161	A1	20080110	US 2007-771249	20070629
JP 2008013474	A	20080124	JP 2006-185488	20060705
PRIORITY APPLN. INFO.:			JP 2006-185488	A 20060705

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
OTHER SOURCE(S): CASREACT 148:154937; MARPAT 148:154937  
GI



AB A novel compound for an organic EL device which has a structure represented by the general formula I is described where R1-R4 = halogen, alkyl (C1-C20) in which one methylene group or at least two non-adjacent methylene groups of the alkyl group may be replaced by -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH-, -C≡C-, at least one methylene group of the alkyl group may be replaced by an arylene group which may have a substituent or by a divalent heterocyclic

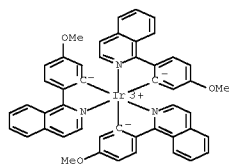
group which may have a substituent, and hydrogen atom(s) of the alkyl group may be substituted with fluorine atom(s), an amino group, a silyl group, an aryl group, or a heterocyclic group; and R5-R12 each represent, independently of one another, hydrogen atom, halogen atom, alkyl group having C1-C20 which is defined the same way as the one for R1-R4 plus a Ph, naphthyl, pyrenyl, fluorenyl, phenanthrenyl, chrysenyl, fluoranthrenyl, triphenylenyl, or tetraphenylanthracenyl group, or a heterocyclic group which may have a substituent; and adjacent ones of R5-R12 may be joined to form a ring structure. An organic electroluminescent device comprising a light-emitting layer comprising the compound is also described. An image display apparatus comprising the organic EL device is also described.

IT 906062-31-5

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(light emitting layer; compound for organic el device and light-emitting device)

RN 906062-31-5 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-kN)-5-methoxyphenyl-kC]- (CA INDEX NAME)



L7 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1357850 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 147:550962

TITLE: Fluorenes and organic electroluminescent devices using them

INVENTOR(S): Igawa, Satoshi; Okada, Shinjiro; Takiguchi, Takao; Hashimoto, Masaaki; Oishi, Ryota

PATENT ASSIGNEE(S): Canon Inc., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 14pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

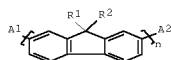
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007308376	A	20071129	JP 2006-135979	20060516

PRIORITY APPLN. INFO.: JP 2006-135979 20060516

OTHER SOURCE(S): MARPAT 147:550962

GI



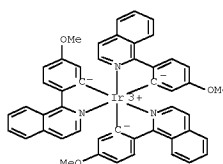
AB The fluorenes are I (R1, R2 = H, C1-20 alkyl, aryl; A1, A2 = H, C1-20 alkyl, aryl, heterocyclyl; ≥1 of A1 and A2 = 2-carbazolyl II; R3-R10 = H, halo, C1-20 alkyl, aryl, heterocyclyl; n = 2-4). Preferably, the electroluminescent devices have emitter layers containing I as hosts and Ir coordination compds. as guests. The devices show high luminescence efficiency and intensity, and long service life.

IT 906062-31-5

RL: MOA (Modifier or additive use); USES (Uses)  
(guest; fluorenes as hosts for emitter layers for organic electroluminescent devices)

RN 906062-31-5 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-kN)-5-methoxyphenyl-kC]- (CA INDEX NAME)



L7 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1153794 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 147:436581

TITLE: High efficiency multicolor organic light emitting device

INVENTOR(S): Furugori, Manabu

PATENT ASSIGNEE(S): Canon Inc., Japan

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 17pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101047203	A	20071003	CN 2007-10091491	20070330
JP 2007273231	A	20071018	JP 2006-96874	20060331

JP 4402069 B2 20100120 20070221  
US 20070272921 A1 20071129 US 2007-677292 20070221  
PRIORITY APPLN. INFO.: JP 2006-96874 A 20060331

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

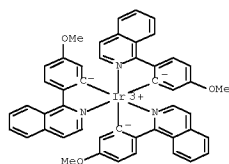
AB The title multicolor organic light emitting device comprises a substrate, and multiple organic light emitting elements on the substrate. The light emitting elements include a first organic light emitting element of a first emission color light, and a second organic light emitting element of a second emission color light different from the first emission color light. The first organic light emitting element includes a first electrode made of a first material, an organic compound layer at least including a light emitting layer, and a light transmitting second electrode arranged in sequence from the substrate side. The second organic light emitting element includes a first electrode made of a second material with a reflection index and a phase shift different from those of the first material, an organic compound layer at least including a light emitting layer, and a second electrode arranged in sequence from the substrate side. The multicolor organic light emitting device has high efficiency.

IT 906062-31-5

RL: TEM (Technical or engineered material use); USES (Uses)  
(high efficiency multicolor organic light emitting device)

RN 906062-31-5 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-kN)-5-methoxyphenyl-kC]- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L7 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1121459 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 147:406955

TITLE: Preparation of cyclometalated iridium complex as organic electroluminescence device

INVENTOR(S): Kamatani, Jun; Okada, Shinjiro; Takiguchi, Takao

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan

SOURCE: U.S. Pat. Appl. Publ., 39 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

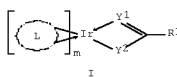
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20070232803 A1 20071004 US 2007-686441 20070315  
JP 2007269733 A 20071018 JP 2006-99892 20060331  
PRIORITY APPLN. INFO.: JP 2006-99892 A 20060331

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): CASREACT 147:406955; MARPAT 147:406955  
GI



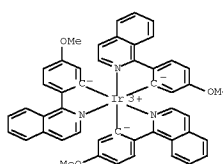
AB The invention provides a method for producing an iridium complexes I (L = monovalent bidentate ligand having (un)substituted aromatic or heterocyclic ring; R1 = H, halo, heteroatom (un)substituted C1-20 linear or branched alkyl group, etc.; Y1, Y2 = O, S, Se, N, etc.) with a high yield at a low temperature, and an organic electroluminescence device (organic EL device) having a light output high in efficiency and high luminance in a range from blue to red region. An iridium complex for the organic EL device is produced from an iridium complex having a 4-membered ring structure as an auxiliary ligand. The organic EL device is composed of at least a pair of electrodes serving as an anode and a cathode, and an organic compound layer interposed between the electrodes, and the organic compound layer contains an iridium complex.

IT 906062-31-5P

RL: NUU (Other use, unclassified); FRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(preparation of cyclometalated iridium complex as organic electroluminescence device)

RN 906062-31-5 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-kN)-5-methoxyphenyl-kC]- (CA INDEX NAME)



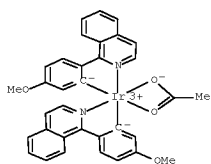
IT 951164-50-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of cyclometalated iridium complex as organic electroluminescence device)

RN 951164-54-8 CAPLUS

CN Iridium, (acetato-KO,KO')bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]- (CA INDEX NAME)



L7 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2006:841986 CAPLUS Full-text

DOCUMENT NUMBER: 145:259393

TITLE: Indenoindole derivatives, organic electroluminescent devices therewith, and displays therefrom

INVENTOR(S): Igawa, Satoshi; Takiguchi, Takao; Okada, Shinjiro; Kamatani, Atsushi; Hashimoto, Masashi; Kurokawa, Minako

PATENT ASSIGNEE(S): Canon Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

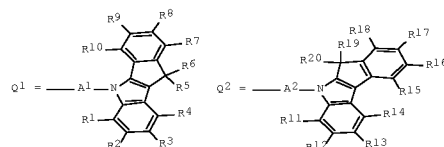
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006219393	A	20060824	JP 2005-32802	20050209
PRIORITY APPLN. INFO.:			JP 2005-32802	20050209

OTHER SOURCE(S): MARPAT 145:259393

GI

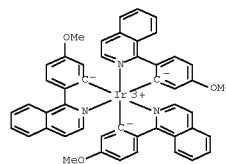


AB The compds. having (substituted) indenoindole-containing partial structures, preferably represented by Q1 or Q2 (A1, A2 = single bond, arylene, bivalent heterocycle; R1-R20 = H, halo, C1-20 alkyl, aryl, heterocycle), are claimed. The compds. show high solvent solubility, form stable amorphous deposited films, and are useful for host materials of organic LED. Organic EL devices/displays containing the compds. in 21 of organic layers, showing high luminescent efficiency and durability, are also claimed.

IT 906062-31-5  
RL: DEV (Device component use); USES (Uses)  
(guest, emitting layers; indenoindole derivs. showing stable glassy state and useful for host materials of organic EL displays)

RN 906062-31-5 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]- (CA INDEX NAME)



L7 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2006:632152 CAPLUS Full-text

DOCUMENT NUMBER: 145:112952

TITLE: Metal complexes with nucleophilic carbene ligands and devices and processes using them

INVENTOR(S): Pretot, Roger; Van Der Schaaf, Paul Adriaan; Schmidt, Jemima; Schmidhalter, Beat; Schaefer, Thomas; Lamatch, Bernd

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 149 pp.

CODEN: PIIXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006067074	A1	20060629	WO 2005-EP56767	20051214

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, ME, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BI, KS, KZ, MD, RU, TJ, TM

CA 2589711 A1 20060629 CA 2005-2589711 20051214

EP 1841834 A1 20071010 EP 2005-817212 20051214

EP 1841834 B1 20090506

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

CN 101087863 A 20071212 CN 2005-80044163 20051214

JP 2008525366 T 20080717 JP 2007-547457 20051214

BR 2005019375 A2 20090120 BR 2005-19375 20051214

AT 430789 T 20090515 AT 2005-817212 20051214

EP 2080796 A1 20090722 EP 2009-153071 20051214

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

IN 2007CN02780 A 20070907 IN 2007-CN2780 20070625

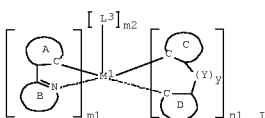
KR 2007091355 A 20070910 KR 2007-7016762 20070720

PRIORITY APPLN. INFO.:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2004-106916	A	20041223		
EP 2005-817212	A3	20051214		
WO 2005-EP56767	W	20051214		

OTHER SOURCE(S): MARPAT 145:112952

GI



AB The title complexes are described by the general formula I (ring A = an optionally substituted aryl group which can optionally contain heteroatoms; ring B = an optionally substituted nitrogen-containing aryl group, which can optionally contain further heteroatoms; ring A and ring B may be bonded to form a ring; group C = an acyclic carbene or a cyclic carbene which can

optionally contain heteroatoms; ring D = an optionally substituted aryl group which can optionally contain heteroatoms; n1 = 1 = 3, m1 = 0, 1, or 2; m2 = 0 or 1; M1 = a metal with an atomic weight > 40; L3 = a monodentate or bidentate ligand; Y = -C(=O)- or -C(X1)2-; X1 = H or C1-4 alkyl; and y = 0 or 1) with the exception of certain specified compds. The use of the compds. is described in electronic devices, especially organic light-emitting diodes, as oxygen-sensitive indicators, as phosphorescent indicators in bioassays, and as catalysts. Organic electronic devices, especially organic light-emitting diodes, comprising an emitting layer which comprises the compds., as well as displays employing the light-emitting diodes, are also described.

IT 895544-48-6 895545-50-1 895546-70-0

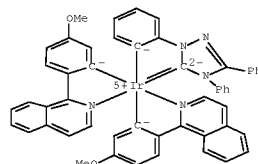
895548-18-2 895549-41-4 895551-08-3

895552-25-7 895553-12-8

RL: DEV (Device component use); USES (Uses)  
(metal complexes with nucleophilic carbene ligands and devices and processes using them)

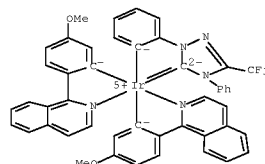
RN 895544-48-6 CAPLUS

CN Iridium, [(3,4-diphenyl-1H-1,2,4-triazol-1-yl-5(4H)-ylidene)-1,2-phenylene]bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]- (9CI) (CA INDEX NAME)

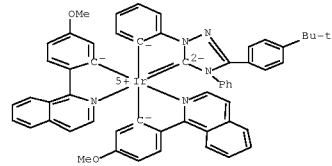


RN 895545-58-1 CAPLUS

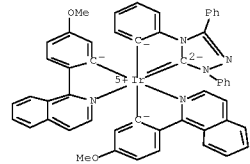
CN Iridium, bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC][1,2-phenylene[4-phenyl-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl-5(4H)-ylidene]]- (9CI) (CA INDEX NAME)



RN 895546-70-0 CAPLUS  
CN Iridium, [[3-[4-(1,1-dimethylethyl)phenyl]-4-phenyl-1H-1,2,4-triazol-1-yl-5(4H)-ylidene]-1,2-phenylene]bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]- (9CI) (CA INDEX NAME)



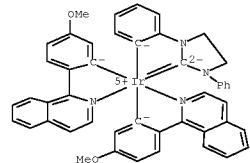
RN 895548-19-3 CAPLUS  
CN Iridium, [(1,3-diphenyl-1H-1,2,4-triazol-4(5H)-yl-5-ylidene)-1,2-phenylene]bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]- (9CI) (CA INDEX NAME)



RN 895549-41-4 CAPLUS  
CN Iridium, bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC][1,2-phenylene[1-phenyl-3-(trifluoromethyl)-1H-1,2,4-triazol-4(5H)-yl-5-ylidene]]- (9CI) (CA INDEX NAME)



RN 895554-12-8 CAPLUS  
CN Iridium, bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC][1,2-phenylene(3-phenyl-1-imidazolidinyl-2-ylidene)]- (9CI) (CA INDEX NAME)

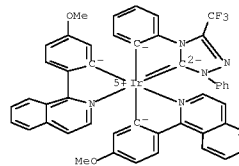


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

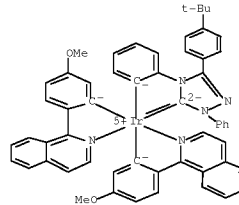
L7 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2006:517153 CAPLUS Full-text  
DOCUMENT NUMBER: 145:17468  
TITLE: Phenanthroline compounds and light-emitting devices employing the phenanthroline compounds as a host in light-emitting layer  
INVENTOR(S): Igawa, Satoshi; Okada, Shinjiro; Takiguchi, Takao; Furugori, Manabu  
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
SOURCE: U.S. Pat. Appl. Publ., 12 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060115676	A1	20060601	US 2005-272726	20051115
US 7517596	B2	20090414		
JP 2006151866	A	20060615	JP 2004-344041	20041129

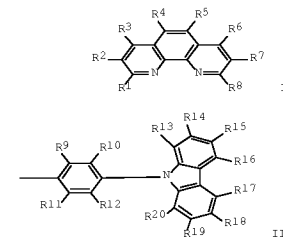
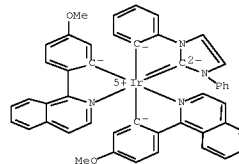
PRIORITY APPLN. INFO.: JP 2004-344041 A 20041129  
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
OTHER SOURCE(S): MAREPAT 145:17468  
GI



RN 895551-08-3 CAPLUS  
CN Iridium, [[3-[4-(1,1-dimethylethyl)phenyl]-1-phenyl-1H-1,2,4-triazol-4(5H)-yl-5-ylidene]-1,2-phenylene]bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]- (9CI) (CA INDEX NAME)



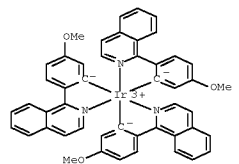
RN 895552-25-7 CAPLUS  
CN Iridium, bis[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC][1,2-phenylene(3-phenyl-1H-imidazol-1-yl-2(3H)-ylidene)]- (9CI) (CA INDEX NAME)



AB Novel phenanthroline compds. are provided which are suitable for use in organic electroluminescent device and are represented by the general formula (I), where R1-8 are each independently a hydrogen atom, an alkyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted heterocyclic group, or a halogen atom with the proviso that at least one of R1-8 is a group represented by the general formula (II) in which R9-20 are each independently a hydrogen atom, an alkyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted heterocyclic group, or a halogen atom. Highly efficient electroluminescent devices employing the phenanthroline derivs. as host in the light-emitting layer are also discussed.

IT 895552-89-7  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(phosphorescent dopant; phenanthroline compds. and light-emitting devices employing phenanthroline compds. as host in light-emitting layer)

RN 895552-89-7 CAPLUS  
CN Iridium, tris[2-(1-isoquinolinyl-KN)-5-methoxyphenyl-KC]-, (OC-6-22)- (CA INDEX NAME)





REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2006:299209 CAPLUS Full-text  
DOCUMENT NUMBER: 144:321249  
TITLE: Organic electroluminescent devices employing phosphorescent dopants and display apparatus  
INVENTOR(S): Kishino, Kengo; Okada, Shinjiro; Igawa, Satoshi; Hashimoto, Masashi; Iwakaki, Hironobu; Kurokawa, Minako; Kamatani, Jun  
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
SOURCE: U.S. Pat. Appl. Publ., 14 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060066225	A1	20060330	US 2005-235117	20050927
US 7466073	B2	20081216		
JP 2006128632	A	20060518	JP 2005-261940	20050909
JP 4110160	B2	20080702		

PRIORITY APPLN. INFO.: JP 2004-283239 A 20040929  
JP 2005-261940 A 20050909

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

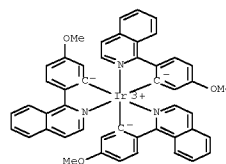
AB The present invention provides a phosphorescent luminescent device which has high-efficiency and a long lifetime. Organic electroluminescent devices are described which comprise a pair of electrodes, and an organic layer disposed between the pair of electrodes, the organic layer having at least a light-emitting layer, where the light-emitting layer comprises a host material and dopants containing at least a first dopant and a second dopant, and where a triplet lowest excitation level of the first dopant is higher than a triplet lowest excitation level of the second dopant is lower than the triplet lowest excitation level of the host material.

IT 855532-89-7

RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(dopant; organic electroluminescent devices employing phosphorescent dopants and display apparatus)

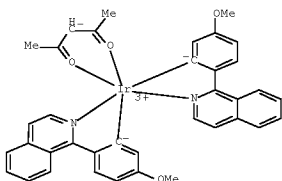
RN 855532-89-7 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl)-5-methoxyphenyl-KC]-, (OC-6-22)- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2006:15403 CAPLUS Full-text  
DOCUMENT NUMBER: 144:274396  
TITLE: Color tuning of iridium complexes - Part I: Substituted phenylisoquinoline-based iridium complexes as the triplet emitter  
AUTHOR(S): Fang, Kai-Hung; Wu, Li-Lan; Huang, Yu-Ting; Yang, Cheng-Hsien; Sun, I-Wen  
CORPORATE SOURCE: Department of Chemistry, National Cheng Kung University, Tainan, 70101, Taiwan  
SOURCE: Inorganica Chimica Acta (2006), 359(2), 441-450  
CODEN: ICHAA3; ISSN: 0020-1693  
FUBLISHER: Elsevier B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 144:274396  
AB New Ir complexes with isoquinoline-derived ligands were synthesized for application in organic light-emitting diodes (OLEDs). Varying the substituents at the 2'- or 4'-positions of the isoquinoline ligand makes the color tuning possible. Because of the steric effect, the 6'-substituted complexes: (acetylacetonato)bis[1-(6'-methyl)phenylisoquinolinato-N,C2']iridium(III) (6b1), (acetylacetonato)bis[1-(6'-trifluoromethyl)phenylisoquinolinato-N,C2']iridium(III) (6b2), and (acetylacetonato)bis[1-(6'-methoxy)phenylisoquinolinato-N,C2']iridium(III) (6b3) show red shift effect with respect to the 4'-substituted complexes: (acetylacetonato)bis[1-(4'-methyl)phenylisoquinolinato-N,C2']iridium(III) (6a1), (acetylacetonato)bis[1-(4'-trifluoromethyl)phenylisoquinolinato-N,C2']iridium(III) (6a2), and (acetylacetonato)bis[1-(4'-methoxy)phenylisoquinolinato-N,C2']iridium(III) (6a3). All of these complexes are suitable for the red phosphorescent materials in OLEDs.  
IT 878016-19-4  
RL: CFS (Chemical process); DEV (Device component use); FEF (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
(preparation, structure, electrochem., photoluminescence and use of iridium complexes with substituted phenylisoquinoline-derived ligands as triplet emitters in OLEDs)  
RN 878016-19-4 CAPLUS  
CN Iridium, bis[1-(4-methoxyphenyl)isoquinolinato](2,4-pentanedionato)- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)  
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2005:1313749 CAPLUS Full-text  
DOCUMENT NUMBER: 144:43022  
TITLE: Light-emitting devices employing organic host materials doped with phosphorescent dopants with optimized differences in electron affinity and ionization potential  
INVENTOR(S): Iwakaki, Hironobu; Okada, Shinjiro; Takiguchi, Takao; Igawa, Satoshi; Hashimoto, Masashi; Furugori, Manabu; Kishino, Kengo; Kurokawa, Minako  
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan  
SOURCE: U.S. Pat. Appl. Publ., 11 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050276994	A1	20051215	US 2005-131352	20050518
US 7687154	B2	20100330		
JP 2006032883	A	20060202	JP 2004-283240	20040929
JP 4546203	B2	20100915		

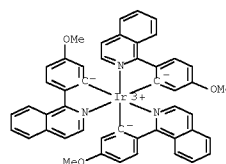
PRIORITY APPLN. INFO.: JP 2004-176557 A 20040615  
JP 2004-283240 A 20040929

AB Light-emitting devices are described which comprise an anode, a cathode, and an organic light-emitting layer sandwiched between the anode and the cathode, in which the organic light-emitting layer is composed of a host material and one or more kinds of dopants, a difference in electron affinity between the host material and at least one kind of the dopants is 0.3 eV or less, and a difference in ionization potential between the host material and the at least one kind of the dopants is 0.8 eV or less.

IT 855532-89-7

RL: DEV (Device component use); MOA (Modifier or additive use); PRP

(Properties); USES (Uses)  
(dopant; light-emitting devices employing organic host materials doped with phosphorescent dopants with optimized differences in electron affinity and ionization potential)  
RN 855532-89-7 CAPLUS  
CN Iridium, tris[2-(1-isoquinolinyl)-5-methoxyphenyl-KC]-, (OC-6-22)- (CA INDEX NAME)



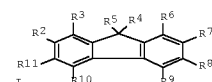
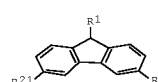
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)  
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2005:1129101 CAPLUS Full-text  
DOCUMENT NUMBER: 143:376654  
TITLE: (2-Fluorenyl)carbazoles, and their organic electroluminescent devices and displays showing high luminescence efficiency and intensity  
INVENTOR(S): Kamatani, Atsushi; Okada, Shinjiro; Takiguchi, Takao; Igawa, Satoshi; Hashimoto, Masashi; Kurokawa, Minako  
PATENT ASSIGNEE(S): Canon Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
CODEN: JKKXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005289914	A	20051020	JP 2004-108652	20040401

PRIORITY APPLN. INFO.: JP 2004-108652 20040401

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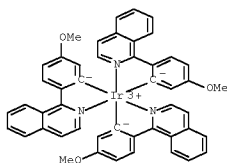


AB Title compds. are I [R1, R21, R22 = H, halo, C1-20 alkyl (having CH2 substituted with O, S, P, etc.), (substituted) amino, silyl, aryl, heterocyclyl, (substituted) adamantyl; R1 = substituents other than carbazole-containing ones; 21 of R1, R21, and R22 = 2-fluorenyl II [R3-R11 = H, halo, C1-20 alkyl (having CH2 substituted with O, S, P, etc.), (substituted) amino, etc.] or their repeated structure]. Thus, an organic electroluminescent device having an emitter layer containing I (R1 = R21 = R22 = 9,9-dimethyl-2-fluorenyl) and phosphorescent Ir complex dopant is exemplified.

IT 855532-89-7  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(phosphorescent dopant for emitter layer; fluorenylcarbazoles for organic electroluminescent devices and displays)

RN 855532-89-7 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-kN)-5-methoxyphenyl-kC]-, (OC-6-22)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L7 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2010 ACS on SIN

ACCESSION NUMBER: 2005:356313 CAPLUS Full-text

DOCUMENT NUMBER: 143:78282

TITLE: Substituent effects of iridium complexes for highly efficient red OLEDs

AUTHOR(S): Okada, Shinjiro; Okinaka, Keiji; Iwakaki, Hironobu; Furugori, Manabu; Hashimoto, Masashi; Mukaide, Taihei; Kamatani, Jun; Igawa, Satoshi; Tsuboyama, Akira; Takiguchi, Takao; Ueno, Kazunori

CORPORATE SOURCE: Canon Inc., 5-1, Morinosato Wakamiya, Atsugishi, Japan

SOURCE: Dalton Transactions (2005), (9), 1583-1590

CODEN: DTARAF; ISSN: 1477-9226

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:78282

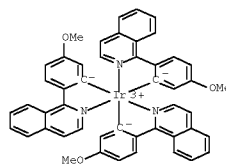
AB This study reports substituent effects of iridium complexes with 1-phenylisoquinoline ligands. The emission spectra and phosphorescence quantum yields of the complexes differ from that of tris(1-phenylisoquinolinato-

C2,N)iridium(III) (Irpiq) depending on the substituents. The maximum emission peak, quantum yield and lifetime of those complexes ranged from 598-635 nm, 0.17-0.32 and 1.07-2.34  $\mu$ s, resp. This indicates the nature of the substituents has a significant influence on the kinetics of the excited-state decay. The substituents attached to Ph ring have an influence on a stability of the HOMO. Furthermore, those substituents have effect on the contribution to a mixing between 3 $\pi$ - $\pi^*$  and 3MLCT for the lowest excited states. Some of the complexes display the larger quantum yield than Irpiq, which has the quantum yield of 0.22. The organic light emitting diode (OLED) device based on tris [1-(4-fluoro-5-methylphenyl)isoquinolinato-C2,N]iridium(III) (Ir4F5Mpiq) yielded high external quantum efficiency of 15.5% and a power efficiency of 12.4 lm W<sup>-1</sup> at a luminance of 218 cd m<sup>-2</sup>. An emission color of the device was close to an NTSC specification with CIE chromaticity characteristics of (0.66, 0.34).

IT 855532-89-78  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); FRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(preparation and substituent effects of cyclometalated phenylisoquinoline iridium complexes for highly efficient red OLEDs)

RN 855532-89-7 CAPLUS

CN Iridium, tris[2-(1-isoquinolinyl-kN)-5-methoxyphenyl-kC]-, (OC-6-22)- (CA INDEX NAME)



OS.CITING REF COUNT: 49 THERE ARE 49 CAPLUS RECORDS THAT CITE THIS RECORD (49 CITINGS)

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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